

<b>Report for:</b> John Q Jones Smithville Municipal Authority Smithville PA 12234	<b>Additional copy to:</b> Jane P Smith Smithville Municipal Authority Smithville PA 12234	<b>Sample information:</b> Lab ID <b>E21210</b> Sample ID Dryer Class A Biosolids Sample type Composite Sampled 6/15/2022 9:00 AM Received 6/20/2022 11:30 AM Reported 7/1/2022
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***Analytical Report for Use of Biosolids on Cropland***

Analysis	Units	Result <sup>1</sup>	Limit of Quantitation	Method	Analyst	Date/Time <sup>2</sup>	Qualifiers and notes <sup>3</sup>
pH	-	7.5 @ 22.6 C	-	EPA 9045 D	RB	06/20/2022 2:50 PM	ht
Total Solids	%	93.1	0.02	SM 2540 G	PA	06/20/2022	tp
Volatile Solids	%	79.7	0.02	SM 2540 G	PA	06/20/2022	tp
Total-Nitrogen	%	7.40	0.03	SOP(588)TN Combustion	PA	06/22/2022	tp
Ammonium-Nitrogen	%	0.21	0.005	SOP(588) E14, SM 4500-NH3 D	RB	06/22/2022	tp
Organic-Nitrogen	%	7.19	-	Calculated	-	-	-
Phosphorus	%	2.48	0.002	EPA 3050B+6010	IO/PA	06/23/2022	sa
expressed as P <sub>2</sub> O <sub>5</sub>	%	5.67	0.004	Calculated	-	-	-
Potassium	%	0.27	0.004	EPA 3050B+6010	IO/PA	06/23/2022	sa
expressed as K <sub>2</sub> O	%	0.33	0.004	Calculated	-	-	-
Calcium	%	1.28	0.018	EPA 3050B+6010	IO/PA	06/23/2022	sa
Magnesium	%	0.48	0.001	EPA 3050B+6010	IO/PA	06/23/2022	sa
Sodium	%	0.14	0.001	EPA 3050B+6010	IO/PA	06/23/2022	sa
Iron	%	3.22	0.001	EPA 3050B+6010	IO/PA	06/23/2022	sa
Aluminum	%	0.27	0.001	EPA 3050B+6010	IO/PA	06/23/2022	sa
Manganese	mg/kg	181.46	0.70	EPA 3050B+6010	IO/PA	06/23/2022	sa

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Arsenic	mg/kg	6.1	1.1	EPA 3050B+6010	IO/PA	06/23/2022	none
Cadmium	mg/kg	0.8	0.4	EPA 3050B+6010	IO/PA	06/23/2022	none
Chromium	mg/kg	28.0	1.1	EPA 3050B+6010	IO/PA	06/23/2022	none
Copper	mg/kg	750.7	1.1	EPA 3050B+6010	IO/PA	06/23/2022	none
Lead	mg/kg	145.1	1.8	EPA 3050B+6010	IO/PA	06/23/2022	none
Mercury	mg/kg	0.57	0.003	EPA 7473	PA	06/21/2022	tp
Molybdenum	mg/kg	7.7	1.1	EPA 3050B+6010	IO/PA	06/23/2022	none
Nickel	mg/kg	19.2	0.7	EPA 3050B+6010	IO/PA	06/23/2022	none
Selenium	mg/kg	3.7	1.8	EPA 3050B+6010	IO/PA	06/23/2022	none
Zinc	mg/kg	479.8	3.5	EPA 3050B+6010	IO/PA	06/23/2022	none
PCBs	mg/kg	< 0.01	0.01	EPA 8082A	-	06/29/2022	fw

<sup>1</sup> Concentration of all analytes expressed on a dry weight basis unless otherwise noted

<sup>2</sup> Date and time analysis started. Time of analysis only reported for analytes with holding times less than 48 h.

<sup>3</sup> Qualifiers and notes (if noted above)

*ht* - Holding time for the analyte exceeded. Note, the regulatory holding time for pH is 0.25 hours.

*tp* - Sample received by laboratory at a temperature that exceeded preservation requirements for the method.

*sa* - This analyte is not covered by the laboratory's scope of accreditation.

*dp* - Relative percent difference of replicate measurements failed to meet quality control objectives for the method. Results should be viewed as an estimate.

*sp* - The matrix spike recovery failed to meet established quality control objectives for the method. Results should be viewed as an estimate.

*fw* - Analysis subcontracted to Fairway Laboratories, Inc. (NELAP: PA 07-062).



John Spargo, Laboratory Director



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***Appendix: Interpretive Guidelines for Use of Biosolids on Cropland***

**USEPA REGULATIONS FOR LAND APPLICATION OF BIOSOLIDS (40 CFR Part 503) and PA DEP GUIDELINES FOR AGRICULTURAL UTILIZATION OF BIOSOLIDS**

	mg/kg	0-	Acceptable	Pollutant Limit	Acceptable-increased monitoring	Ceiling Limit	Exceeds ceiling limits
As	6.08	0-	-----	41-	-----	75-	-----
Cd	0.79	0-	-----	39-	-----	85-	-----
Cu	750.7	0-	-----	1500-	-----	4300-	-----
Pb	145.1	0-	-----	300-	-----	840-	-----
Hg	0.57	0-	-----	17-	-----	57-	-----
Mo	7.7	0-	-----	75-	-----		-----
Ni	19.2	0-	-----	420-	-----		-----
Se	3.71	0-	-----	100-	-----		-----
Zn	479.8	0-	-----	2800-	-----	7500-	-----
PCB	< .01	0-	-----	4-	-----	8.6-	-----

**PRIMARY NUTRIENT CONTENT and DRY WEIGHT CONVERSIONS**

	%, dry wt basis		
Total N	7.40	0.68	dry tons of this biosolid will supply 100 lbs of total N.
P <sub>2</sub> O <sub>5</sub>	5.67	2.02	dry tons of this biosolid will supply 100 lbs of P
K <sub>2</sub> O	0.33		

One dry ton of this material is equivalent to 258 gallons of wet material or 1.1 tons of wet material